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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/008,740	11/13/2001	Ying Guo	8988.3827	6041
22235	7590	02/24/2004	EXAMINER	
MALIN HALEY AND DIMAGGIO, PA 1936 S ANDREWS AVENUE FORT LAUDERDALE, FL 33316			EDWARDS, LAURA ESTELLE	
			ART UNIT	PAPER NUMBER
			1734	

DATE MAILED: 02/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/008,740	Applicant(s) GUO, YING	
	Examiner Laura E. Edwards	Art Unit 1734	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 8-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-7, drawn to a spin pack assembly, classified in class 425, subclass 463.
- II. Claims 8 and 9, drawn to spin pack housing, classified in class 425, subclass 131.5.
- III. Claims 10-13, drawn to a method of distributing polymer, classified in class 264, subclass 172.11.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the combination or spin pack assembly does not require a spin pack housing including all of the following structure: a rigid, elongated member having a first elongate chamber and a second elongated chamber, the length of the housing being substantially in a ratio of greater than 20 to 1 length to width, of said housing, the housing being shaped as a rectangular polyhedron having length, width, and height, the first chamber and second chamber disposed along the length of said body and being equal in volume; and a polymer diversion block for diverting molten polymer mounted in the housing along its length and occupying a significant volume of said first chamber, the block being sized in width relative to the width of the first chamber to allow polymer to flow on each side downwardly and being sized and shaped to insure

Art Unit: 1734

that polymer within said first chamber is maintained at uniform pressure along the length of said first chamber. The subcombination has separate utility such as being used to feed two different liquids to a coating apparatus.

Inventions III and I are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the apparatus or spin pack assembly can be used with another and materially different process such as mixing components to form an adhesive for application in stripes to a disposable substrate such as a diaper.

Inventions III and II are also related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case, the apparatus or housing as claimed does not have to be used for manufacturing biocomponent filaments but can be used to uniformly supply viscous materials used to manufacture tire cords.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

During a telephone conversation with Mr. Haley on 2/11/04, a provisional election was made with traverse to prosecute the invention of Group I, claims 1-7. Affirmation of this election must be made by applicant in replying to this Office action. Claims 8-13 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 112

Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, line 8, Applicant recites "at lest one distribution plate" but in line 19 and in depending claims 2, and 3, Applicant refers to "distribution plates". Therefore, it is unclear whether Applicant is intending to claim one distribution plate or plural distribution plates. Clarification is necessary.

In claim 2, Applicant recites a means for maintaining uniform pressure in the first and second chambers but already recites diversion means mounted in both chambers in claim 1. The plural diversion means of claim 1 maintain uniform pressure in both chambers. Therefore, it is unclear what additional structure is being referred to in claim 2 because the diversion means in claim 1 already meet such a function even though claim 1 does not recite that the diversion means maintain uniform pressure. Clarification is necessary.

Art Unit: 1734

In claim 6, Applicant recites a means for maintaining uniform pressure in the first chamber but already recites a diversion means mounted in the first chamber in claim 1. What additional structure is being referred to in claim 6 because the diversion means in claim 1 already meets such a function even though claim 1 does not recite that the diversion means maintains uniform pressure. Clarification is necessary.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-3, 6, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hills (US 5,344,297) in view of Werner et al (US 3,762,850).

Hills teaches a spin pack assembly comprising a spinneret (15) for generating bicomponent filaments; at least one distribution plate (12, 13, 14) distributing a polymer and

Art Unit: 1734

second polymer mounted on top of said spinneret; spin pack housing (11) including a first polymer inlet means (17) for admitting said first polymer under pressure in a molten state, a second inlet means (18) for admitting a second melted polymer, a first chamber (A) receiving said polymer and a second independent chamber (B) receiving said second polymer; a polymer filter screen (22, 23) provided in each chamber for filtering polymer, and wherein the spin pack housing is connected to the at least one distribution plate for receiving the first and second polymers independently (see Fig. 4). Hills fails to teach or suggest diversion means mounted in each chamber. However, it was known in the art, at the time the invention was made, to provide a diverter means or flow guide element in a spin pack housing polymer chamber preceding the filter in the direction of flow of polymer in order to provide uniform polymer distribution and prevent stagnation or dead spaces in the chamber as evidenced by Werner et al (see col. 2, lines 68+ to col. 3, lines 1-7, and col. 4, lines 32-37). It would have been obvious to one of ordinary skill in the art to provide a diverter means or flow guide element, as taught by Werner et al, into the polymer chambers of Hills in order to provide uniform polymer distribution and prevent stagnation or dead spaces within each chamber.

With respect to claims 2 and 6, the diverter means as taught by Werner et al provides for uniform distribution of polymer from the chamber onto the filter and subsequent distribution plates such that one of ordinary skill in the art would expect maintenance of uniform pressure within spin pack assembly as defined by the combination above due to the inclusion of the flow guide in each chamber.

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hills (US 5,344,297) in view of Kilsdonk (US 3,762,854).

Hills teaches a spin pack assembly comprising a spinneret (15) for generating bicomponent filaments; at least one distribution plate (12, 13, 14) distributing a polymer and second polymer mounted on top of said spinneret; spin pack housing (11) including a first polymer inlet means (17) for admitting said first polymer under pressure in a molten state, a second inlet means (18) for admitting a second melted polymer, a first chamber (A) receiving said polymer and a second independent chamber (B) receiving said second polymer; a polymer filter screen (22, 23) provided in each chamber for filtering polymer, and wherein the spin pack housing is connected to the at least one distribution plate for receiving the first and second polymers independently (see Fig. 4). Hills fails to teach or suggest diversion means mounted in each chamber. However, it was known in the art, at the time the invention was made, to provide a diverter means or apron having a flat upper surface and tapering bottom in a spin pack housing polymer chamber preceding the filter in the direction of flow of polymer in order to provide uniform distribution of polymer in the chamber as evidenced by Kilsdonk (see col. 2, lines 26-33; col. 3, lines 6-9; see Figs. 1 and 2). It would have been obvious to one of ordinary skill in the art to provide a diverter means or apron, as taught by Kilsdonk, into the polymer chambers of Hills in order to provide uniform distribution of polymer within each chamber.

With respect to claims 2 and 6, the diverter means, as taught by Kilsdonk, provides for uniform distribution of polymer from the chamber onto the filter and subsequent distribution plates such that one of ordinary skill in the art would expect maintenance of uniform pressure

Art Unit: 1734

within spin pack assembly as defined by the combination above due to the inclusion of the flow guide in each chamber.

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hills (US 5,344,297) in view of Keil et al (US 5,513,973).

Hills teaches a spin pack assembly comprising a spinneret (15) for generating bicomponent filaments; at least one distribution plate (12, 13, 14) distributing a polymer and second polymer mounted on top of said spinneret; spin pack housing (11) including a first polymer inlet means (17) for admitting said first polymer under pressure in a molten state, a second inlet means (18) for admitting a second melted polymer, a first chamber (A) receiving said polymer and a second independent chamber (B) receiving said second polymer; a polymer filter screen (22, 23) provided in each chamber for filtering polymer, and wherein the spin pack housing is connected to the at least one distribution plate for receiving the first and second polymers independently (see Fig. 4). Hills fails to teach or suggest diversion means mounted in each chamber. However, it was known in the art, at the time the invention was made, to provide a diverter means having a flat upper surface and tapering bottom in a spin pack housing polymer chamber preceding the filter in the direction of flow of polymer in order to provide uniform pressure or flow of polymer in the chamber as evidenced by Keil et al (see col. 4, lines 20-31 and lines 50-54; see Figs. 1 and 2a). It would have been obvious to one of ordinary skill in the art to provide a diverter means, as taught by Keil et al into the polymer chambers of Hills in order to provide uniform pressure or flow of polymer in each chamber.

Art Unit: 1734


Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents disclose the state of the art with respect to diverter or apron elements for directing polymeric flow within a spin pack assembly: Siegman et al (US 4, 276,011), Topor et al (US 4, 290,989), and Gubernick et al (US 5, 080,569).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura E. Edwards whose telephone number is (571) 272-1227. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Laura E. Edwards
Primary Examiner
Art Unit 1734

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February 13, 2004